







## ELECTRICAL/ELECTRONICS ASSEMBLY/TEST

Updating Electrical/Electronic Assembly, 15 mini case histories. Jan., p. 40. Controlling Static Electricity In Electronic Assembly, Walter. H. Schwartz, Mar., p. 27. Updating Electronic Assembly, 4 mini case histories, Mar., p. 32. ATE Update, Walter H. Schwartz, Apr. p. 18. Solder/Cleaning, Test and Rework In Electronics Assembly, May. p. 66. Flexible Electronic Assembly: The Chrysler Approach, Walter H. Schwartz, July, p. 32. Robots in PC Board Assembly. Walter H. Schwartz, Aug., p. 34. SMT Update, Walter H. Schwartz, Sept. p. 90. Assembling The MacIntosh, Sept. p. 108. Laser In Electronics Manufacturing. Gehard Marcinkowski, Coherent General, Oct., p. 15. Electromechanical Assembly Clean Room

Electromechanical Assembly Clean Hoor Update, Walter H. Schwartz, Oct., p. 28. PC Board Rework Salvages Profits, Walter H. Schwartz, Nov., p. 46. Design For Fixturing: The Key To Surface

Design For Fixturing: The Key To Surface Mount PC Board Test, Walter H. Schwartz, Dec., p. 28.

## IDEAS AND DEVELOPMENTS

Static Control Work Surfaces, Neil I. Safeer, Spaulding Fiber Co., Mar., p. 29. Some Notes On Soldering in Electronics Assembly, Greg Evans, Indium Corp. of America, May, p. 68.

Vision Solves PC Board Assembly Problems, Elaine Ide Wood, Adept Technology, Aug., p. 35.

Software Driven Component System, Greg Holcomb, Chad Industries, Aug., p. 36. Robotic Insertion of PC Board Connectors, Jan Jurcy, Molex, Inc., Aug., p. 37. Some Assembly Problems With Surface Mount Components, Charles Henri Mangin, CEERIS, Inc., Sept., p. 91.

# DESIGN/FASTENING/JOINING

Production And Reliability Increased While Costs Are Cut, 13 mini case histories, Jan., p. 30.

Designing Parts for Automated Assembly, Robert Waterbury, Feb., p. 24

Dispensing Components Link Brewer, Distributor, Mar., p. 36.

Designing for Fastening/Joining Productivity, 10 mini case histories, Mar., p. 38.

Automating Adhesive and Sealant Dispensing, Richard J. Pilarski, Robotics, Inc., Apr., p. 24. Fastening Systems and Trends in Electronic Assembly, May, p. 79.

Torque-Monitoring Nutrunners, July, p. 26.

200

Robots Grasp The Real World, Robert Waterbury, Aug., p. 26.

Applying Adhesives In Surface Mount, Walter H. Schwartz, Sept., p. 84.

Stud Welding Takes The Credit, Sept. p. 104. Cold Forming Shapes Savings,

Walter H. Schwartz, Oct., p. 42

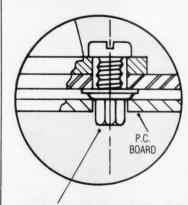
Maintaining Welding Quality, Walter H. Schwartz, Nov., p. 38.

Soldering and Brazing Put It All Together, Donald E. Hegland, Dec., p. 24.

## IDEAS AND DEVELOPMENTS

A British Adhesive Update, Arthur Fryatt, Ceng, MIProdE, Apr., p. 26.

Visual Inspection: The Foundation of Welding Quality Control, Michael D. Cooper, Hobart School of Welding Technology, Nov., p. 40.



NEW ONE PIECE SYNC NUT INSTALLATION









## ELECTRICAL/ELECTRONICS ASSEMBLY/TEST

Updating Electrical/Electronic Assembly, 15 mini case histories. Jan., p. 40. Controlling Static Electricity In Electronic Assembly, Walter. H. Schwartz, Mar., p. 27. Updating Electronic Assembly, 4 mini case histories, Mar., p. 32. ATE Update, Walter H. Schwartz, Apr. p. 18. Solder/Cleaning, Test and Rework In Electronics Assembly, May. p. 66. Flexible Electronic Assembly: The Chrysler Approach, Walter H. Schwartz, July, p. 32. Robots in PC Board Assembly. Walter H. Schwartz, Aug., p. 34. SMT Update, Walter H. Schwartz, Sept. p. 90. Assembling The MacIntosh, Sept. p. 108. Laser In Electronics Manufacturing. Gehard Marcinkowski, Coherent General, Oct., p. 15. Electromechanical Assembly Clean Room

Electromechanical Assembly Clean Hoor Update, Walter H. Schwartz, Oct., p. 28. PC Board Rework Salvages Profits, Walter H. Schwartz, Nov., p. 46. Design For Fixturing: The Key To Surface

Design For Fixturing: The Key To Surface Mount PC Board Test, Walter H. Schwartz, Dec., p. 28.

## IDEAS AND DEVELOPMENTS

Static Control Work Surfaces, Neil I. Safeer, Spaulding Fiber Co., Mar., p. 29. Some Notes On Soldering in Electronics Assembly, Greg Evans, Indium Corp. of America, May, p. 68.

Vision Solves PC Board Assembly Problems, Elaine Ide Wood, Adept Technology, Aug., p. 35.

Software Driven Component System, Greg Holcomb, Chad Industries, Aug., p. 36. Robotic Insertion of PC Board Connectors, Jan Jurcy, Molex, Inc., Aug., p. 37. Some Assembly Problems With Surface Mount Components, Charles Henri Mangin, CEERIS, Inc., Sept., p. 91.

# DESIGN/FASTENING/JOINING

Production And Reliability Increased While Costs Are Cut, 13 mini case histories, Jan., p. 30.

Designing Parts for Automated Assembly, Robert Waterbury, Feb., p. 24

Dispensing Components Link Brewer, Distributor, Mar., p. 36.

Designing for Fastening/Joining Productivity, 10 mini case histories, Mar., p. 38.

Automating Adhesive and Sealant Dispensing, Richard J. Pilarski, Robotics, Inc., Apr., p. 24. Fastening Systems and Trends in Electronic Assembly, May, p. 79.

Torque-Monitoring Nutrunners, July, p. 26.

200

Robots Grasp The Real World, Robert Waterbury, Aug., p. 26.

Applying Adhesives In Surface Mount, Walter H. Schwartz, Sept., p. 84.

Stud Welding Takes The Credit, Sept. p. 104. Cold Forming Shapes Savings,

Walter H. Schwartz, Oct., p. 42

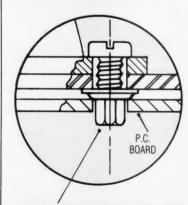
Maintaining Welding Quality, Walter H. Schwartz, Nov., p. 38.

Soldering and Brazing Put It All Together, Donald E. Hegland, Dec., p. 24.

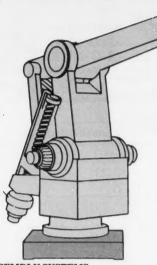
## IDEAS AND DEVELOPMENTS

A British Adhesive Update, Arthur Fryatt, Ceng, MIProdE, Apr., p. 26.

Visual Inspection: The Foundation of Welding Quality Control, Michael D. Cooper, Hobart School of Welding Technology, Nov., p. 40.



NEW ONE PIECE SYNC NUT INSTALLATION



#### ASSEMBLY SYSTEMS PRODUCTION/TEST

Assembly Systems "Get It Together," 17 mini case histories, Jan., p. 18.

Planning for Automated Assembly: The Common Denominator, Walter J. Maczka, Feb., p. 16.

Conveyor System Helps Automate Computer Assembly, Feb., p. 46.

Small Robots Twist and Apply On Assembly Line, Feb., p. 50.

Assembly Systems "Build" Savings, 3 mini case histories, Feb., p. 52

AS/RS: The Future Is Now, Mar., p. 44. Feeding The Assembly System.

Walter J. Maczka, Apr., p. 32. Tips For Productivity, 13 mini case histories,

Apr., p. 38. Systems, Vision and Components in Electronic

Assembly, May, p. 44.

Panel of Specialists Discusses Assembly Automation, July, p. 38.

Robots Called To Assembly, Walter H. Schwartz, Aug., p. 20.

Tips for Productivity, case histories, Sept., p. 98.

Vision Technologies Expand Manufacturing Horizons, Ghasson N. Kahwati, Eastman Kodak Co., Oct., p. 18

Design for Automatic Screwfeeding, Martin Singer, Michael Heck, Nasco Industries, Nov., p. 28.

Power Tools Find Niche in Automated Assembly, Robert Waterbury, Dec., p. 18.

### IDEAS AND DEVELOPMENTS

Integrated Robotic Assembly, H. Berger, Northern Telecom, May, p. 46. Automated Wire Harness Assembly,

Michael E. McClung, Rockwell International, May, p. 47.

Automated Connector Assembly, Thomas A. Howell, The Deutsch Co., May, p. 51.

Automatic Dispensing Improves Productivity, Bill Schlict, Kistler-Morse, May, p. 59.

Robots Stress High Precision and Low Cycle Time, F. Hide, Kanematsu-Gosho (USA) Inc., Aug., p. 22.

Counterpoint, Leopold Grant, Kingsbury Machine Tool Corp., Aug., p. 23.

### MANAGEMENT SYSTEMS

Information Handling Boosts Productivity, Quality, Efficiency, 7 mini case histories, Jan., p. 50.

Statistical Quality Control In Automated Assembly Equipment, Michael M. McRae. Benerson Corp., Jan., p. 56.

Work-in-Process, Control and Accountability, Harold A. Bailey, Data Composition, Inc., Feb., p. 38.

Software Animates Assembly Workcells, Robert Waterbury, Mar., p. 16.

CIM: Product, Process, Perception or Promise?, Robert Waterbury, Apr., p. 10. Computers Track Production, Eric Ford, BSc (Econ), BComm, Engineering Gazette, London, Apr., p. 44.

Industry Overview and CAE/CAD/CAM In Electronic Assembly, May, p. 26. CEO Mid Year Review and Outlook 1985, Robert Waterbury, July, p. 18. Al: Human Implants Boost Machine IQ.

Robert Waterbury, Aug., p. 40. Microcomputers Move Into Manufacturing,

Robert Waterbury, Sept., p. 22.

FMS Expands Into Assembly, Robert Waterbury, Oct., p. 34. Developing An Information System for SPC,

Frederick E. Lowe, Concert Corp., Nov., p. 20. CIM Removes Slashes From CAD/CAM/CAT, Robert Waterbury, Dec., p. 12.

#### IDEAS AND DEVELOPMENTS

Bar Codes and Distributed Processing Achieve Quality and Productivity Gains, David J. Knight, Industrial Computer Design, Inc., Feb., p. 40. Microcomputer Analyzes Critical Path, Sept., p. 25.

PC-Based Software Solves Assembly Tolerance Problems, Sept., p. 26.

### DOWN THE LINE

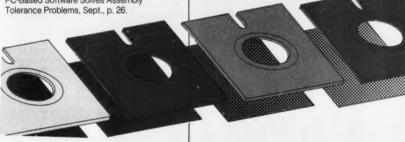
Instant Coffee, Instant Oatmeal, Instant Slides. Jeff Fiedler, Apr., p. 88. Windmills: From LaMancha to Altamont. Karen S. Dvorak, Dec., p. 64.



# 1985 P.A.T. AWARDS

Change, Robert Waterbury, June, p. 12. Martin Marietta Integrates Towards Batch-of-One Assembly, Walter H. Schwartz, June, p. 18. Bailey "Controls" Its Future In Assembly, Walter J. Maczka, June, p. 24. Chrysler's World Class Assembly, June, p. 30. Integrated Assembly at Xerox, June, p. 32. Priam Opts for Automation, June, p. 34. IBM's Manufacturing Logic, June, p. 36. Chrysler's "Class" Electronics, June, p. 38. 11 Certificate of Merit Stories, June, p. 41.

Whirlpool Corporation Adapts To Vortex of



#### ASSEMBLY CLINIC

Untangling The Mystery of Spring Feeding, Jan Lindstrom, Columbi, Jan., p. 63. Illuminating Parts for Vision Inspection, Stanley Lapidus, Itran Corp., Mar., p. 51. Self Clinching Fastener Automation, Neal O. Gallaher, Penn Engineering, July, p. 44.

#### SPECIAL PROGRAMS

NEPCON West Preview, Feb., p. 30. ROBOTS 9, May, p. 88. Assembly Technology Highlights Productivity Through ATExpo, Nov., p. 56.

